Communicating spatial risk of tick-borne infections: Creating a ScandTick Innovation website based on surveillance data

Clausen, Cecilie Grønlund; Schou, Kirstine Klitgaard; Kirkeby, Carsten; Bødker, Rene

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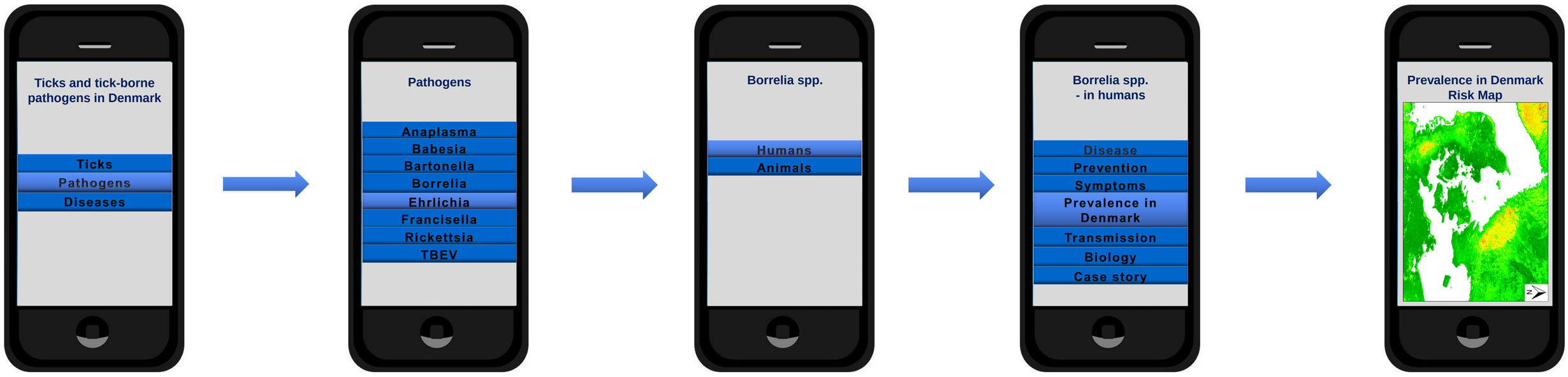
Creating a ScandTick Innovation website based on surveillance data

Cecilie Grønlund Clausen, Kirstine Klitgaard Schou, Carsten Kirkeby, René Bødker

Section for Epidemiology, National Veterinary Institute, Technical University of Denmark

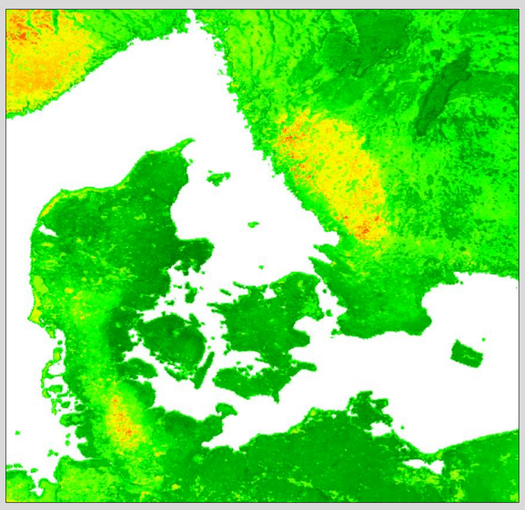


Introduction

On a new informative website we illustrate the spatial prevalence and variation of tick-borne pathogens in Denmark, which has been largely unknown until now. By increasing awareness of this variation, we aim to ensure early diagnosis, more effective prevention of tick-borne diseases and to provide quantitative risk estimates to health professionals.

Risk map

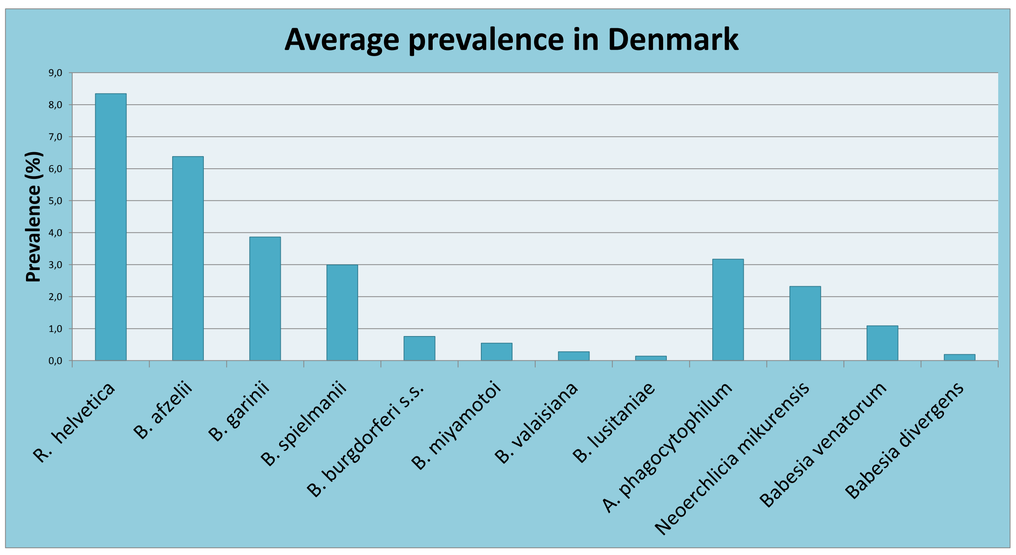
Map illustrating the probability finding a positive pool (N=15) of *Candidatus Neoehrlichia mikurensis* throughout Denmark (green → red : increasing probability). This model was made using remote sensing and is based on preliminary data.



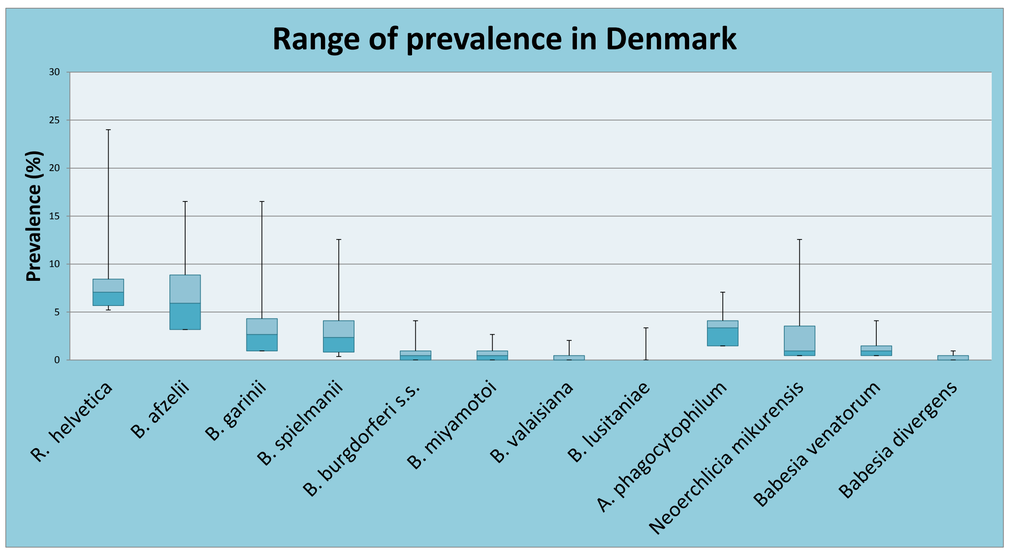
Website

The aim is to communicate quantitative and targeted information on ticks, pathogens and the risk of infection and illness. The website is directed towards the public, veterinarians and general practitioners and be quickly accessible from a smartphone.

Data



The average prevalence of tick-borne pathogens throughout Denmark makes it possible to rank the pathogens in order of abundance. *B. lusitaniae* is the least and *R. helvetica* the most prevalent tick-borne pathogens in Denmark.



Illustrating the range of data for each pathogen reveals a geographical variation in the prevalence of tick-borne pathogens in Denmark. Fx. the prevalence *B. miyamotoi* ranges between 0% - 2,6%, indicating that the risk of infection will vary between geographical areas. This information can be helpful in the assessment of potential infection risks.

DTU VET
National Veterinary Institute
Section for Epidemiology
Technical University of Denmark

Bülowsvej 27
1870 Frederiksberg C

Corresponding author:

Cecilie Grønlund Clausen
Research Assistant, MSc

Phone: +45 40 95 16 95
Email: cgcl@vet.dtu.dk

Technical University of Denmark